DISCLAIMER: These Standard Operating Procedures (SOP's) are for the exclusive use of Navy Public Works Center (PWC) Norfolk. They are promulgated as guidance for their NAVFAC Commands. If intended to be used by other activities, they must be tailored to each activity's particular requirements and must be reviewed/approved by the activity's safety professionals prior to use.

NAVY PUBLIC WORKS CENTER
NORFOLK, VIRGINIA
UTILITIES DEPARTMENT

STANDARD OPERATING PROCEDURE / JOB HAZARD ANALYSIS

TITLE

4160 VOLT SHIP CONNECT

PROCEDURE NUMBER

623 ELE 8

SIGNED:_____

(DATE)

APPROVED:_____

(DATE)

SAFETY PROFESSIONAL:_____

(DATE)

MANAGEMENT OFFICIAL:_____

(DATE)

REVISION **C**

DISTRIBUTION

CODE	REV/DATE	REV/DATE	REV/DATE	REV/DATE	REV/DATE	REV/DATE	REV/DATE
601.C3							
620							
622							
610.E1							
622.5							

REVISIONS

REV	DESCRIPTION	SIGNATURE	DATE
A	Initial Issue.	J. Miller	3/27/95
B	Note added to switch via Switch 201 not the 4160 circuit breakers till Pier 12 Substation is renovated.	J. Miller	4/02/96
C	Deleted note added to switch via Switch 201 instead of the 4160 circuit breakers.	D. Midgett	5/03/96

4160 VOLT SHIP CONNECT

Purpose:
PWC NAS 4160 ship connect SOP.

Potential Energy sources:
4160 cable, 4160 ship, 4160 breaker, exposed 11.5 kv overhead bus at pier 11 substation, DC control power, AC low voltage.

Tools and PPE:
Spanner wrench, potential tester rated 5000 volts or more, red tags, safety shoes and glasses, Nomex hoods and coveralls, class 2 and work gloves, hard hats.

References:
1. Pwc HV lockout/tagout procedures.
2. NFPA table A for approach distances.
3. Occupational Health and Safety act, 1978 table 2.
4. SOP for PWC Switching Or Breaker Operation.

Procedures:
"HV safety shoes shall be worn throughout this procedure."
During each step fill out necessary information on the Ship Connect/Disconnect form.

1. Physically verify that appropriate PWC shore power breakers are racked out, opened, locked, tagged, and you have possession of the appropriate tags.

2. Prior to contacting the ship perform an insulation resistance test on each cable phase to phase, each cable phase to PLM case, each receptacle phase to phase, and each receptacle phase to PLM case with a 5000 volt meggar. Values shall be greater then 6 Mohm.

3. Contact ships electrical officer or higher ranking ship representative.

4. Verify with ships representative that cables have been connected to shipboard bus.

"Nomex coveralls, hoods, and safety glasses are required for steps 5, 6, and 8"

5. Verify plugs and receptacles are deenergized with a potential tester.

6. Connect to the receptacle.

7. Set up barricades around the 4160 cable. Wear work gloves.

8. Have Foreman verify with ships representative that ship is ready for power. At Foreman's command follow SOP for PWC Switching Or Breaker Operation, clear tags, rack in, and close PWC breakers from the remote operator.

9. Verify with PWC Foreman that proper rotation and correct voltage have been provided.